

REMARKS

In view of the Office Action of October 6, 2005, claims 1-12 stand rejected and are pending in this application. Independent claim 1 and dependent claim 2 have been amended to more distinctly define the claimed invention. Claims 13 through 19 have further been added to claim other structures and methods of the multiple embodiments of the present invention.

Claims 1-12 stand rejected under 35 USC §103(a) as being unpatentable over Bright et al. (US 4,716,494) in view of Moore (US 4,575,038). The office action states that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the retention system for removable heat sink of Bright with the mounting member of Moore.

Nevertheless, none of the prior art references describe a heat sink which directly engages both the integrated circuit board assembly and the mounting member to establish a low thermal resistance path from the integrated circuit to the mounting member, permitting heat to be conveniently removed from the integrated circuit.

In order to illustrate Applicant's present invention, as disclosed with regards to one embodiment described on page 6, lines 17-23, the heat sink engages the ends of the spring clip, the spring clip will bend and exert a force on the heat sink, pulling the heat sink against surface 44 of the mounting member, resulting in solid thermal contact between the heat sink on the printed circuit assembly and the mounting member. As such the heat sink directly engages both the integrated circuit board and the mounting member. (See also Figures 5a and 5b). This results in a low thermal resistance connection between the heat sink and the mounting member. (See also page 7, lines 3-24). Accordingly,

independent claim 1 has been amended to distinctly claim that the heat sink directly engages both the integrated circuit board assembly and the mounting member to establish a low thermal resistance path from the integrated circuit to the mounting member.

In contrast, the Office Action is correct in that Bright fails to disclose a mounting member. Accordingly, the heat sink in Bright does not directly engage a mounting member as provided by the Applicant. Moreover, Moore does not describe a system or structure that provides for a heat sink which *directly* engages both the integrated circuit board assembly and the mounting member. More specifically, Moore describes a member connected to or part of a chassis portion of the electronic equipment. A spring clip is further provided for receiving and releasing a semiconductor device package. As shown, in Figures 3 and 4 and as described in Column 3, lines 27-32, Moore further describes a system for mounting a heat sink 40 a predetermined distance above the surface of circuit board 44. The heat sink as described in Moore accordingly indirectly engages the mounting member through the spring clip support members 22, 24. Therefore, the heat sink never *directly* engages both the integrated circuit board assembly and the mounting member as provided in Applicant's independent claim 1. In fact, Moore teaches away from such as it describes that the heat sink is mounted a predetermined distance above the surface of the circuit board to allow for proper air flow around the heat sink and the washing of flux and other debris from circuit board after soldering. (See Column 3, lines 27-32).

Accordingly, Applicants respectfully request withdrawal of all rejections. In view of the foregoing, reconsideration and allowance of all claims are respectfully requested. The Examiner is invited to telephone the Applicants' undersigned attorney at (312) 236-

8500 if any unresolved matters remain. The Commissioner is further authorized to charge any applicable fees for filing this amendment to deposit Account No. 50-1039.

Respectfully submitted,

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Dated: December 28, 2005